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REMARKS

Applicant notes that the above rejection has been improperly made "final" and respectfully request the finality to be withdrawn. Particularly, as pointed out in Applicants last response (footnotes 1-3) claims 24, 26 and 32 depend on and incorporate all of the limitations of claims 22, 25 and 31, respectively. The Office actions explains that the combination of Williams and Cooper does not meet all of the limitations of each of claims 22, 25 and 31, but goes on to assert that all of the limitations of claims 24, 26 and 32, which include the limitations of claims 22, 25, and 31, are met by the mere combination of Williams and Cooper. Clearly, the rejection of at least claims 24, 26 and 32 is improper on its face and must be withdrawn.

Applicants also note that it does not appear that the examiner considered the references cited on the IDS submitted on April 8, 2003. Applicants respectfully request consideration of this IDS and an indication thereof.

I. Introduction

Claims 1-31 are pending in the above application.

Claims 1-31 stand rejected under 35 U.S.C. § 103.

Claims 1, 5, 12, 15 and 18 are independent claims.

II. Amendment

The specification has been amended to reword a statement discussing an upstream directional coupler to avoid confusion. It is respectfully submitted that one of ordinary

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skill in the art would appreciate the operation of a directional coupler as presently amended.

Claim 5 has been amended to more precisely claim what applicant regards as the invention therein.

No new matter has been added.

III. Rejections Under Prior Art

A. Claims 1-21, 23, 24, 2-30 and 32 stand rejected under 35 U.S.C. § 103 as being unpatentable over Williams (U.S. Pat. 5,745,836) in view of Cooper et al. (U.S. Pat. 6,772,437).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *Ecolchem Inc. v. Southern California Edison Co.*, 227 F.3d 1361, 56 U.S.P.Q.2d (BNA) 1065 (Fed. Cir. 2000); *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2D (BNA) 1614, 1617 (Fed. Cir. 1999); *In re Jones*, 958 F.2d 347, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992); and *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). See also MPEP 2143.01.

1. Independent Claim 1

The examiner has maintained the rejection from the previous Office action and asserts that "Williams clearly teaches monitoring (Column 10, Line 40), isolating (Column 10, Line 66), and even reporting (Column 10, Lines 43-45) ingress noise

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traveling upstream (see Column 4, Lines 66-67 and Column 5, Lines 1-10) in an HFC network (Column 7, Lines 46-49)." Office action, pg. 2. The Office action is mistaken and misconstrues the teaching of Williams. Each of the examiner's assertions will be discussed in turn. As explained in applicants previous response, neither Williams nor Cooper, taken alone or in combination, disclose or suggest a system for monitoring, isolating and reporting ingress noise traveling upstream in an HFC network which includes a BTP remotely located at or downstream from the node at or downstream from an RF amplifier in the HFC network, as recited by claim 1.

Williams merely discloses to open a gate (switch) to prevent all signals (noise and legitimate signals) from passing, hence isolating a portion of the network referred to as a "dirty" portion. Williams, col. 5: 23-60, as stated: "the gate is an RF switch ... that connects and disconnects the shared communication path to prevent any signal or other energy from passing the gate" (underlining added for emphasis). Williams discloses to attach a "gate enabling signal" to legitimate signals in order to close the gate to allow the signals to pass. Williams, col. 6: 26-46, "closing the gate or return gate ... for transmissions that are accompanied by a gate enabling signal, prevents undesirable, unwanted, and uncontrolled ingressing energy from propagating through the network." William explains that any unwanted signals will also pass when the gate is closed. Williams, col. 6: 29-39. While Williams suggests that "if undesirable energy persists for every transmission ... the headend can force the gate open to cut off the distribution branch until the undesirable energy is isolated and/or terminated", Williams does not explain how to detect the noise from legitimate signals nor to isolate the noise from the

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legitimate signals. Indeed, Williams simply suggests to use a bandpass filter or unexplained "diagnostic routines" to deal with the noise. Williams, col. 6: 58-61.

Contrary to the conclusion of the examiner, Williams does not disclose a BTP to monitor ingress noise or report ingress noise. The Office action cites to Column 10, Line 40, which is clearly directed toward preventing attacks by pirates by monitoring the prybar activity, i.e. monitoring an unauthorized instruction to close the gate by a pirate. See, col. 10: 25-45 "return gate device 140 can also be used to detect attempts by pirates to gain access to the network 100 ... any attempt to enable the return gate 225 while the return path 120 is busy will be detected by the return gate device 140" (underlining added for emphasis). Williams clearly distinguishes between pirates and noise, and even goes to great lengths to explain differences between them, e.g. devoting nearly an entire column in the patent to the explanation. Col. 4: 8-56. There is no suggestion in Williams that noise could instruct the prybar to close the gate (i.e. take the form of a gate enabling signal) as the Office action appears to conclude. The apparent conclusion by the Office action that noise could activate the prybar receiver of Williams to be detected as "undesirable energy" is pure speculation and ignores the explicit description of the operation of the prybar receiver, of "noise" and of pirate attacks provided by Williams.

Cooper also does not disclose system for monitoring, isolating and reporting ingress noise traveling upstream in an HFC network which includes a BTP remotely located at or downstream from the node at or downstream from an RF amplifier in the HFC network, as recited by claim 1. Cooper merely discloses a cable modem which capable of performing power measurements. Abs. The cable modem of Cooper is clearly located at the subscriber.

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Accordingly, as neither Williams nor Cooper, taken alone or in combination, disclose all of the claimed limitations of claim 1, the combination of Williams and Cooper does not render claim 1, nor claims 2-4, 21 and 23-24, which depend on claim 1 and incorporate all of the limitations thereof, unpatentable.¹

2. Independent Claim 5

Regarding claims 5-11, neither Williams nor Cooper, taken alone or in combination disclose or suggest an HFC network which includes a BTP including an ingress noise monitoring interface connected to a downstream-facing directional coupler and a modem configured to communicate with the domain manager through the upstream-facing directional coupler to transmit and report detected ingress noise information, the downstream-facing directional coupler being located on the RF line upstream from the upstream-facing directional coupler, as recited by amended claim 5. Williams clearly does not disclose such, and merely discloses a return gate device 140 upstream of tap 170. Fig. 2. Williams does not discuss a coupler of a tap and any relation of a BTP thereto. While the Office action appears to suggest that Williams must use a tap for return gate device 140, there is certainly no suggestion in Williams to connect a monitoring interface to a downstream coupler and communicate with a modem through an upstream coupler, the downstream couple being locate upstream of the upstream coupler.

¹ Applicants note that although claim 24 is indicated to be rendered obvious over the combination of Williams and Cooper, claim 24 depends on claim 22, and incorporates all of the limitations thereof. However, the Office action acknowledges that the combination of Williams and Cooper does not meet all of the limitations of claim 22 and relies on Bushue to make up for the deficiencies of Williams and Cooper. Hence, the combination of Williams and Cooper clearly does not meet all of the limitations of claim 24.

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Cooper is concerned with a modem, not a tap, and also does not discuss a couple of a tap and any relation of a BTP thereto. Fig. 1.

Accordingly, as neither Williams nor Cooper, taken alone or in combination, disclose all of the claimed limitations of claim 5, the combination of Williams and Cooper does not render amended claim 5, nor claims 6-11 and 27, which depend on amended claim 5 and incorporate all of the limitations thereof, unpatentable.²

3. Independent Claim 12

Regarding claim 12, the Office action completely fails to establish a prima facie case of obviousness. Neither Williams nor Cooper, taken alone or in combination disclose or suggest a system for monitoring ingress noise in an HFC network which includes a BTP with a downstream-facing directional coupler, an upstream-facing coupler, and an ingress noise monitoring and isolating interface connected to the downstream facing coupler.

Accordingly, as neither Williams nor Cooper, taken alone or in combination, disclose all of the claimed limitations of claim 12, the combination of Williams and Cooper does not render claim 12, nor claims 13 and 14, which depend on claim 12 and incorporate all of the limitations thereof, unpatentable.

² Applicants note that although claim 26 is indicated to be rendered obvious over the combination of Williams and Cooper, claim 26 depends on claim 25, and incorporates all of the limitations thereof. However, the Office action acknowledges that the combination of Williams and Cooper does not meet all of the limitations of claim 25 and relies on Wagner to make up for the deficiencies of Williams and Cooper. Hence, the combination of Williams and Cooper clearly does not meet all of the limitations of claim 26.

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4. Independent Claims 15 And 18

Regarding claims 15 and 18, as discussed above, neither Williams nor Cooper discloses an HFC network with includes a BTP connected to particular couplers as recited in claims 15 and 18. Particularly, assuming, arguendo, that Williams discloses a BTP in Figure 2, the couplings in Figure 3 are contained within another embodiment of such alleged BTP. Accordingly, as neither Williams nor Cooper, taken alone or in combination, disclose all of the claimed limitations of claims 15 or 18, the combination of Williams and Cooper does not render claims 15 nor 18, nor claims 16, 17, 28, 29 and 30, which depend on claim 12 and incorporate all of the limitations thereof, nor claims 19, 20 and 32 which depend on claim 12 and incorporate all of the limitations thereof, unpatentable.³

B. Claims 22 and 25 stand rejected under 35 U.S.C. § 103 as being unpatentable over Williams in view of Cooper and further in view of Bushue et al. (5,845,190).

Neither Williams, Cooper nor Bushue, taken alone or in combination, disclose or suggest all of the limitations of claims 22 and 25, which depend on claims 1 and 5, respectively, and incorporate all of the limitations thereof. Neither Williams nor Cooper, taken alone or in combination disclose the limitations of claims 1 and 5 as discussed above. Bushue does not cure the deficiencies of the combination of Williams and Cooper, and the Office action merely relies on Bushue for disclosing a tap with a

³ Applicants note that although claim 32 is indicated to be rendered obvious over the combination of Williams and Cooper, claim 32 depends on claim 31, and incorporates all of the limitations thereof. However, the Office action acknowledges that the combination of Williams and Cooper does not meet all of the limitations of claim 31 and rely on Wagner to make up for the deficiencies of Williams and Cooper. Hence, the combination of Williams and Cooper clearly does not meet all of the limitations of claim 32.

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diplexer. Accordingly, neither Williams, Cooper nor Bushue, taken alone or in combination, disclose or suggest all of the limitations of claims 22 and 25, which depend on claims 1 and 5.

C. Claim 31 stands rejected under 35 U.S.C. § 103 as being unpatentable over Williams in view of Cooper and further in view of Wagner (U.S. Pat. 4,812,779).

Neither Williams, Cooper nor Wagner, taken alone or in combination, disclose or suggest all of the limitations of claim 31, which depends on claim 18, and incorporates all of the limitations thereof. Neither Williams nor Cooper, taken alone or in combination disclose the limitations of claim 18 as discussed above. Wagner does not cure the deficiencies of the combination of Williams and Cooper, and the Office action merely relies on Wagner for disclosing an amplifier with a diplexer. Accordingly, neither Williams, Cooper nor Wagner, taken alone or in combination, disclose or suggest all of the limitations of claim 31, which depends on claim 18.

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IV. Conclusion

Having fully responded to the Office action, the application is believed to be in condition for allowance. Should any issues arise that prevent early allowance of the above application, the examiner is invited contact the undersigned to resolve such issues.

To the extent an extension of time is needed for consideration of this response, Applicant hereby request such extension and, the Commissioner is hereby authorized to charge deposit account number 502117 for any fees associated therewith.

Date:

8/15/05

Respectfully submitted,

By:



Lawrence T. Cullen
Reg. No.: 44,489

Motorola Connected Home Solutions
101 Tournament Drive
Horsham, PA 19044
(215) 323-1797

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Appendix A – Mark-up of Amendments To Specification

[0023] FIG. 2 shows a first preferred embodiment of the present invention, which includes a tap 22 that has been modified to support a BTP 30. Preferably, the tap 22 is located just downstream from an amplifier 20 so that the BTP 30 can monitor all ingress sources for the branch 18 on which the tap 22 is located. The branch 18 enters the upstream end of the tap 22 and is divided by a diplexer 32 into an AC power line 34 and an RF line 36. As is conventional, the tap 22 includes an upstream-facing directional coupler 40, which is configured to pass signals back and forth to and from devices located in the upstream direction only. The upstream-facing directional coupler 40 is connected to a series of splitters 42, which divide the line into multiple (in this case, eight) drop lines 24, most of which are available for connection to subscriber terminals (not shown). One of the drop lines 24 is connected to a modem 62 located in the BTP 30, the function of which will be described in greater detail herein.